

Cutworm Identification and Assessment in Canola

Cutworm Identification

- There are five prominent cutworm species of concern in the canola growing areas of Western Canada.
- The larval stage is the only damaging stage to canola.

1. Pale Western Cutworm

- *Identification:* Mature larvae are pale grey to greenish grey in color; head is yellowish-brown.
- *Distribution:* Most commonly found in arid soils of Alberta and Saskatchewan.
- *Damage:* Typically feeds on stems below the soil surface (subterranean feeder); surface feeds only when soil is very hard or wet. Damage appears as holes cut into new leaves.



Figure 1. Pale Western Cutworm. Source: Frank Peairs, Colorado State University. Bugwood.org

2. Redback Cutworm

- *Identification:* Mature larvae have two dull red stripes along their back; head is yellowish-brown.
- *Distribution:* Across the Canadian prairies.
- *Damage:* Larvae feed on plants during the night and are inactive during the day; chew on leaves and stems at or above the soil surface (surface feeder).



Figure 2. Redback Cutworm. Source: John Gavloski, Manitoba Agriculture and Resource Development.

3. Army Cutworm

- *Identification:* Larvae are pale green-gray to brown in color with black dots along a pale back stripe. The head is light brown with small dark spots.
- *Distribution:* Arid regions of the prairies; rarely found in Manitoba.
- *Damage:* Larvae feed on plants above ground in late afternoon/early evening (surface feeder).



Figure 3. Army Cutworm. Source: Frank Peairs, Colorado State University. Bugwood.org

4. Darksided Cutworm

- *Identification:* Grayish and shiny in color with a prominent white stripe along each side just above the legs; dark spots on the head.
- *Distribution:* Canadian prairies; often found in combination with redback cutworms.
- *Damage:* Larvae feed on emerging plants at or below the soil surface at night.



Figure 4. Darksided Cutworm. Source: John Gavloski, Manitoba Agriculture and Resource Development.



5. Dingy Cutworm

- **Identification:** Grayish brown in colour with a thin light line down the very middle of the back; somewhat diagonal markings that look like tire tracks ("V's") on back; have four equal-sized black dots on the back surface of each abdominal segment.
- **Distribution:** Canadian prairies.
- **Damage:** Larvae climb and feed on leaves; stem feeding is rare.



• **Figure 5.** Dingy Cutworm. Source: John Gavloski, Manitoba Agriculture and Resource Development.

Cutworm Damage and Management

Symptoms of Damage in Canola

- Cutworms typically cause damage in canola from late May to the first few weeks of June.
- Young larvae go through 6 development stages known as "instars" before they become fully grown.
- Between each instar, the cutworm "molts" or sheds its skin.
- When scouting, cut the cutworm in half and look to see if gullet contents are green. If so, it means the cutworms are actively feeding.
- If gullet contents are grey it means larvae are molting and not actively feeding. This may delay or reduce foliar insecticide efficacy.
- Once the cutworms pupate (go into a cocoon brown like shell) they are done feeding and their damage to the crop is done for the season.
- Depending upon cutworm species, damage can appear as:
 - Complete plant consumption from the cotyledon to 5 leaf stage.
 - Leaf notching.
 - Clipped and drying half cotyledons.
 - Leaves of the whole plant left on the soil surface.

Scouting

- Scout fields every 3-4 days during early crop development.
- Many cutworms feed at night which makes scouting difficult.
- Damage generally occurs first on hilltops, south facing slopes or areas with light soil that warm faster.
- Look for bare soil patches in fields or in early evening walk hilltops and watch for bird feeding in areas.
- Dig around roots of plant to scout for cutworm larvae or in dry soil around plants.
- Scout the edge of patches looking under straw or in dry soil (as cutworms do not like wet soil).
- When touched cutworms will curl up into a "C shape."

Thresholds and Management

- Scout entire fields to determine damage as foliar application of insecticides may be required only in certain areas.
 - A nominal threshold of 25 to 35% stand reduction in canola.
 - An action threshold of 4 to 6 cutworms per square meter.
- Proactive utilization of seed treatments such as Lumiderm™ insecticide seed treatment provides excellent cutworm control.
- Utilize best management practices (cultural controls, weed control, tillage) as outlined by the Canola Council of Canada (canolacouncil.org)



Figure 6. Clipped canola plants due to cutworm feeding. Source: Canola Council of Canada.